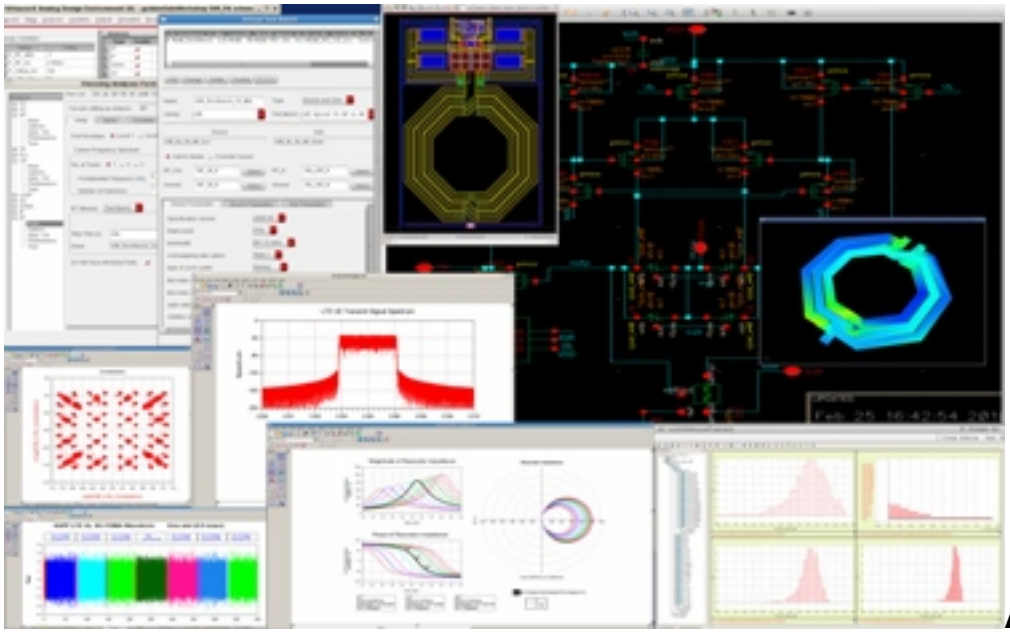
GoldenGate Software Release Accelerates Design Verification

Agilent Technologies announced the latest release of its RFIC simulation, verification and analysis software, GoldenGate 2012.

Raising the bar on performance and usability, the 2012 release offers RFIC designers a host of technology enhancements for accelerated design verification, extended design-for-manufacturing solutions and improved links to system design. Additionally, new licensing models offer users greater purchasing flexibility.

Agilent will demonstrate GoldenGate 2012—along with a range of solutions for everything from circuit-level modeling through system verification for general RF, microwave, 4G communications, and aerospace/defense applications—at DAC2012 (Booth 313), June 3-7, in San Francisco. GoldenGate 2012 will also be demonstrated at IMS 2012/IEEE MTT-S (Booth 1015), June 19-21, in Montréal, Canada.



Accelerating Design Verification

Design verification can be a tedious and time-consuming task for today's RFIC designers. GoldenGate 2012 accelerates design verification through a number of technology enhancements that allow users to set up distributed simulations, run them with unmatched performance, and display and analyze massive amounts of data.

Agilent also offers users an extended "parallel simulation license" at a fraction of the cost of the base GoldenGate simulator license. The license is supported in any scenario launching a parallel simulation (and ADE-XL in Cadence Virtuoso).

X-Parameters* Extraction

A key feature of GoldenGate 2012 is X-parameters extraction. X-parameters are a mathematical superset of S-parameters and are used for characterizing the amplitudes and relative phase of harmonics generated by nonlinear components under large input-power levels. The new GoldenGate 2012 X-parameters feature allows designers to capture the nonlinear behavior of active components such as amplifiers and save the data for quick use in simulation models in RF system or circuit designs, while also hiding all intellectual property.

“We are very pleased to see the new X-parameters extraction support in GoldenGate,” said Alireza Shirvani, vice president of engineering at Amalfi Semiconductor Inc. “We are using X-parameters to speed up design and co-simulation at the die-module interface, and to share an executable circuit model that encodes the proprietary details.”

Additional Enhancements

GoldenGate 2012 features improvements in RFIC simulation, support for advanced analysis and millimeter-wave design, and wireless standard-compliant verification. These and other enhancements are all designed to further improve the software’s performance and usability.

Another enhancement in the area of design-for-manufacturing is the integration of GoldenGate 2012 into the MunEDA WiCkeD tool suite for the analysis, sizing and modeling of circuits. The integration enables automatic compensation of process variations and parasitic influences, and helps reduce the overall power consumption and noise in RF circuits. With GoldenGate 2012, RFIC designers can now more confidently develop leading-edge RF products at advanced nodes.

Expanded Foundry Support

Product enhancements and new capabilities are essential for successful RFIC designs. Meanwhile, foundry and EDA collaboration are equally important to ensure silicon-accurate results at advanced RF process nodes. Agilent EEsof works closely with the major RFIC foundries. As a result, GoldenGate gets continuously qualified against new or updated process nodes.

“We are committed to providing our customers with dedicated RF design-flow support to handle the challenges of today’s sophisticated RF designs,” said Richard Trihy, director of design methodology at GLOBALFOUNDRIES. “Support for GoldenGate provides our customers with access to Agilent’s proven expertise in RF and microwave design. As a next step, we are working to qualify Agilent’s RFIC solution for the 65nm and 55nm nodes.”

GoldenGate is the most trusted simulation, verification and analysis solution available for integrated RF circuit design within the Cadence Virtuoso design flow. Its unique simulation algorithms are optimized for the demands of today’s complex

RF circuit designs, enabling full characterization of complete transceivers prior to tape-out. GoldenGate is part of Agilent's RFIC simulation, analysis and verification solution, which also includes Momentum for 3-D planar electromagnetic simulation, SystemVue and Ptolemy wireless test benches for system-level verification, and the Advanced Design System data display for advanced data analysis.

Agilent's GoldenGate 2012 will be available in August. More information on GoldenGate 2012 is available at www.agilent.com/find/eesof-goldengate [1].

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